MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

INFORMATION FOR TECHNICAL REVIEW – ANHYDROUS AMMONIA STORAGE AND HANDLING

Guidance for Permit Applicants

The following information will be used for the technical review of a Permit to Install application for an **anhydrous ammonia storage and handling equipment.** This information is in addition to the general requirements outlined in the AQD document "Information for an Administratively Complete Permit to Install Application," Part 2 - Additional Supporting Information, Items A through F. Please note that all the information may not be needed for each application, nor is this document necessarily all inclusive. Additional information beyond what is identified in this guidance may be necessary to complete the technical review of any individual application. In the event a determination is made that new additional information is needed for all technical reviews, this document will be updated.

All referenced guidance documents are available on the Air Quality Division (AQD) website at AQD Permits to Install / New Source Review or you may contact the Permit Section at 517-284-6795.

NOTE: Anhydrous ammonia storage and handling processes may be eligible for a general permit. The use of a general permit provides a streamlined permitting alternative to the permitting procedure for processes that meet specified applicability criteria. Information for the general permit is available on the Internet at General Permits to Install.

A. Process Description

Provide the following information:

1. Name plate specifications for the anhydrous ammonia storage tank, including tank water capacity in gallons and tank surface area in square feet.
2. The expected daily and annual throughput of anhydrous ammonia (include seasonal variations).
3. The make, model number, date of manufacture, catalog number, design flow rate, size and location of each excess flow valve, safety relief valve, manifold, and emergency shut-off valve. Include specifications for any remotely operated shut-off valve.
4. Lengths of all hoses and date of hose installation.
5. A drawing of the bulkhead which is required at each transfer area and information on back pressure check valves in each transfer area.
6. A written inspection and maintenance plan including frequency of inspections, recordkeeping, training of responsible personnel, and a complete parts inventory including the dates of manufacture.
7. A written plan of response to emergencies including certification that the appropriate fire department is familiar with the facility, plans for emergency notification of neighbors, on-site safety equipment and training of responsible personnel.

B. Regulatory Discussion

The following state air pollution control regulations may be applicable. Please review these regulations carefully to determine if they apply to your process and summarize the results in the application. The Air Pollution Control Rules may be viewed from the AQD website. Click on "State Air Laws and Rules."

1. State of Michigan, Department of Environment, Great Lakes, and Energy, Act 451 of 1994, Natural Resources and Environmental Protection Act, Part 55 Air Pollution Control and the following promulgated rules:
    a) Rules 215 and 216 apply to an existing facility which has a current Renewable Operating Permit (ROP). A Permit to Install issued for the installation of new equipment or modifications to existing equipment is incorporated into an ROP pursuant to Rules 215 and 216.

b) Rule 901 prohibits emissions of an air contaminant in quantities that cause either a) injurious effects to human health or safety, animal life, plant life of significant economic value, or property; or b) unreasonable interference with the comfortable enjoyment of life and property. The PSD increments (40 CFR 52.21 (c)) and the NAAQS (40 CFR 52.21(d)) apply to all sources throughout the United States, regardless of size. Compliance with these air quality standards can be demonstrated using computerized dispersion modeling. An applicant for a PSD permit is required to submit PSD increment modeling for PM10, PM2.5, SO_2 and NOx, and NAAQS modeling for PM10, PM2.5, SO_2, NOx, CO, Ozone, and Lead as part of the application. Modeling for sources not subject to PSD may be done by the AQD. Refer to "Guidelines for Dispersion Modeling" for additional detailed information.

2. American National Standard (ANSI), Safety Requirements for the Storage and Handling of Anhydrous Ammonia.
3. The Department of Licensing and Regulatory Affairs safety standards, "Part 78, Storage and Handling of Anhydrous Ammonia" (MIOSHA 1910.111).

C. Site Description and Process Equipment Location Drawings

A site description and process equipment drawings including an enhanced plot plan showing the distances to all property lines and identifying all residences, public and commercial facilities within 1,000 feet of the equipment.